



ABSTRACT OF THE DISCLOSURE

A communication system in which multiple protocols and proxy services are executed by an access point. In one embodiment of the invention, GVRP and GMRP registrations are combined in a single packet when a wireless device roams to a different VLAN. In addition, outbound GVRP and GMRP multicast messages are handled by an access point (also referred to as a GVRP and GMRP "gateway") such that the wireless device is not burdened with the associated computational overhead. In a further embodiment, a wireless device may dynamically switch between a VLAN-aware state and a VLAN-unaware state depending on the nature of a detected access point. For example, if a relevant access point supports GVRP, the wireless device may operate as a VLAN terminal. If a wireless device is not attached to an access point with a matching VLAN ID, the wireless device sends and receives VLAN tagged frames. If a wireless device configured with a VLAN ID is attached to an access point with a matching VLAN ID, or if the wireless device is attached to a non-VLAN access point, then the wireless device may send and receive raw/untagged frames. In addition to the gateways described below, the ability of a wireless device to detect when it can send untagged frames is considered novel. In another embodiment of the invention, a special ID that is different than the native VLAN ID for a switch port is used for VLAN-unaware devices. This allows such devices that do not issue tagged frames to belong to a single VLAN ID.